

Check Valve, Metal

Construction

The GEMÜ 560 check valve comprises an angle seat valve body in investment cast stainless steel and a PTFE or PFA seat for tight shut off. The valve is available with various connection types.

Features

- Suitable for inert and corrosive* and liquid media

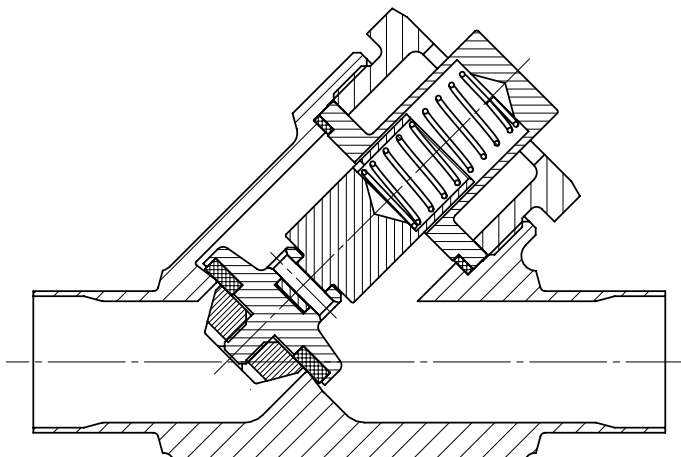
Advantages

- Good flow capability due to angle seat design
- Different connection codes for worldwide use

*see information on working medium on page 2



Sectional drawing



Technical data

Working medium

Corrosive, inert and liquid media which have no negative impact on the physical and chemical properties of the body and seal material.

Media temperature	
Seat seal PTFE code 5	14 °F to 356 °F
Seat seal PTFE, FDA-compliant, USP class VI code 5P	14 °F to 356 °F
Seat seal PFA code 30	14 °F to 320 °F

Other versions for lower/higher temperatures and higher viscosities on request.

Operating pressure

DN 6 - 15	Operator size 0	363 psi
DN 8 - 40	Operator size 1	363 psi
DN 50	Operator size 1	290 psi

Ambient conditions

Max. ambient temperature	140 °F
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Maximum permissible seat leakage rate

Seat seal	Standard	Test procedure	Leakage rate	Test medium
PTFE, PFA	DIN EN 12266-1	P12	A	air

Nominal size	Opening pressure	Weight
DN	[psi]	[lbs]
6 - 15 (Operator size 0)	approx. 2.9	0.5
8 - 15 (Operator size 1)		1.1
20 (Operator size 1)		1.5
25 (Operator size 1)		1.7
32 (Operator size 1)		3.4
40 (Operator size 1)		3.8
50 (Operator size 1)		5.9

All pressures are gauge pressures.

Pressure / temperature correlation for angle seat globe valve bodies

Connection code	Material code	Max. allowable operating pressures in psi at temperature °F*					
		RT	212	302	392	482	572
1, 9, 17, 60, 63	37	363	345	310	274	254	234
0, 16, 17, 37, 59, 60, 65	34	363	355	325	294	264	234
0, 16, 17, 59, 60	40	363	299	271	248	229	215
17, 59, 60	C2	363	307	280	260	244	231

* The valves can be used down to 14 °F

RT = Room temperature

All pressures are gauge pressures.

Order data

Body configuration	Code
2/2-way body	D

Nominal size		Code
DN 6	NPS 1/8"	6
DN 8	NPS 1/4"	8
DN 10	NPS 3/8"	10
DN 15	NPS 1/2"	15
DN 20	NPS 3/4"	20
DN 25	NPS 1"	25
DN 32	NPS 1 1/4"	32
DN 40	NPS 1 1/2"	40
DN 50	NPS 2"	50

Valve body material	Code
1.4435 (ASTM A 351 CF3M $\cong$ 316L), Investment cast.	34
1.4408, Investment casting	37
1.4435 (316 L), Forged body	40
1.4435, Investment casting	C2*
Material equivalency 316 L	
* A surface finish from the order code table "K number" must be specified for valve body material C2.	

Seat seal	Code
PTFE	5
PTFE, FDA-compliant, USP class VI	5P
PFA (only Actuator size 0)	30

Connection	Code
Butt weld spigots	
Spigots DIN	0
Spigots EN 10357 series B	16
Spigots EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	17
Spigots SMS 3008	37
Spigots ASME BPE	59
Spigots ISO 1127 / EN 10357 series C / DIN 11866 series B	60
Spigots ANSI/ASME B36.19M Schedule 10s	63
Spigots ANSI/ASME B36.19M Schedule 40s	65
Threaded connections	
Threaded sockets DIN ISO 228	1
Threaded spigots DIN ISO 228	9

Operator size	Code
Operator (DN 6 - 15 Seat seal PFA)	0
Operator (DN 8 - 50 Seat seal PTFE)	1

Special versions	Code
Surface finish for valve body material C2	
Ra $\leq$ 0,60 μ m (25 μ inch) for process contact surfaces, in accordance with ASME BPE SF2 + SF3, mechanically polished internal	1903
Ra $\leq$ 0,80 μ m (30 μ inch) for process contact surfaces, in accordance with DIN 11866 H3, mechanically polished internal	1904
Ra $\leq$ 0,40 μ m (15 μ inch) for process contact surfaces, in accordance with DIN 11866 H4, ASME BPE SF1, mechanically polished internal	1909

Order example	560	25	D	60	34	5	1	
Type	560							
Nominal size		25						
Body configuration (code)			D					
Connection (code)				60				
Valve body material (code)					34			
Seat seal (code)						5		
Operator size (code)							1	
K-Number (code)								

Dimensions [inch]

Butt weld spigots, connection code 0, 16, 17, 37, 60 Valve body material: 1.4435 (Code 34), 1.4408 (code 37)

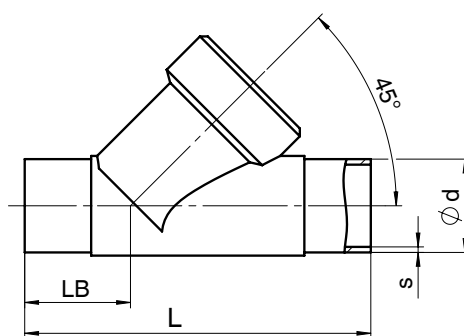
					Connection code									
	Material code 34		Material code 37		0		16		17		37		60	
DN	L	LB	L	LB	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s
10	4.13	1.4	-	-	-	-	0.472	0.039	0.512	0.059	-	-	0.677	0.063
15	4.13	1.4	3.94	1.3	0.709	0.059	0.709	0.039	0.748	0.059	-	-	0.839	0.063
20	4.72	1.54	4.25	1.3	0.866	0.059	0.866	0.039	0.906	0.059	-	-	1.059	0.063
25	4.92	1.52	4.41	1.26	1.102	0.059	1.102	0.039	1.142	0.059	0.984	0.047	1.327	0.079
32	6.1	1.89	5.39	1.54	-	-	1.339	0.039	1.378	0.059	-	-	1.669	0.079
40	6.3	1.85	5.75	1.57	1.575	0.059	1.575	0.039	1.614	0.059	1.496	0.047	1.902	0.079
50	7.09	1.89	6.3	1.5	2.047	0.059	2.047	0.039	2.087	0.059	2.008	0.047	2.374	0.079

For materials see overview on last page

Butt weld spigots, connection code 59, 63, 65 Valve body material: 1.4435 (Code 34), 1.4408 (code 37)

					Connection code					
	Material code 34		Material code 37		59		63		65	
DN	L	LB	L	LB	ø d	s	ø d	s	ø d	s
10	4.13	1.4	-	-	-	-	-	-	-	-
15	4.13	1.4	3.94	1.3	0.500	0.065	0.839	0.083	0.839	0.109
20	4.72	1.54	4.25	1.3	0.750	0.065	1.051	0.083	1.051	0.113
25	4.92	1.52	4.41	1.26	1.000	0.065	1.315	0.108	1.315	0.153
32	6.1	1.89	5.39	1.54	-	-	-	-	1.669	0.140
40	6.3	1.85	5.75	1.57	1.500	0.065	1.902	0.109	1.902	0.145
50	7.09	1.89	6.3	1.5	2.000	0.065	2.374	0.109	2.374	0.154

For materials see overview on last page



Dimensions [inch]

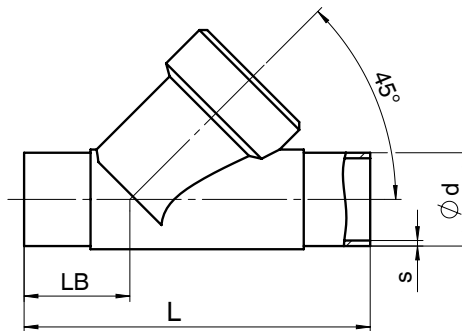
Butt weld spigots, connection code 0, 16, 17, 59, 60 Valve body material: Schmiedekörper (code 40)

			Connection code									
			0		16		17		59		60	
DN	L	LB	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s
6*	3.15	1.04	0.315	0.039	-	-	-	-	-	-	-	-
8*	3.15	1.04	0.394	0.039	-	-	-	-	.	.	0.531	0.063
10*	3.15	1.04	-	-	0.472	0.039	0.512	0.059	0.375	0.035	.	.
15*	3.15	1.04	-	-	-	-	-	-	0.500	0.065	.	.

* only with operator size 0

Butt weld spigots, connection code 17, 59, 60 Valve body material: 1.4435 (code C2)

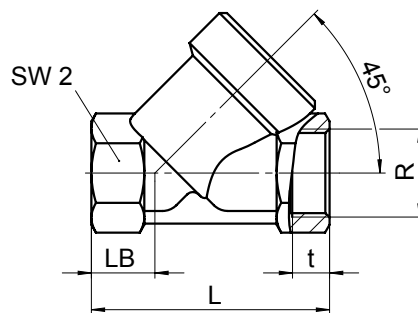
			Connection code					
			17		60		59	
DN	L	LB	ø d	s	ø d	s	ø d	s
8	4.13	1.4	-	-	0.531	0.063	-	-
10	4.13	1.4	0.512	0.059	0.677	0.063	-	-
15	4.13	1.4	0.748	0.059	0.839	0.063	0.500	0.065
20	4.72	1.54	0.906	0.059	1.059	0.063	0.750	0.065
25	4.92	1.56	1.142	0.059	1.327	0.079	1.000	0.065
32	6.1	1.89	1.378	0.059	1.669	0.079	-	-
40	6.3	1.85	1.614	0.059	1.902	0.079	1.500	0.065
50	7.09	1.89	2.087	0.059	2.374	0.079	2.000	0.065



Dimensions

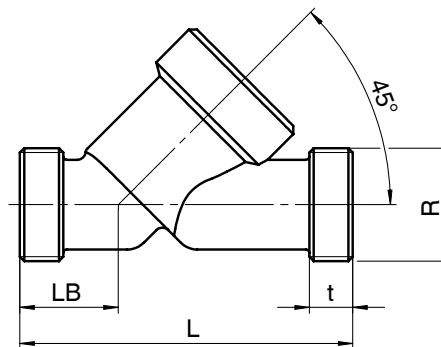
Threaded sockets DIN, connection code 1 Valve body material: 1.4408 (code 37)

DN	L [in]	LB [in]	R	t [in]	SW2 [mm]	
15	2.56	0.65	G 1/2	0.59	27	6-kt
20	2.95	0.69	G 3/4	0.64	32	6-kt
25	3.54	0.94	G 1	0.75	41	6-kt
32	4.33	1.3	G 1 1/4	0.84	50	8-kt
40	4.72	1.18	G 1 1/2	0.84	55	8-kt
50	5.91	1.57	G 2	1.01	70	8-kt



Threaded spigots, connection code 9 Valve body material: 1.4408 (code 37)

DN	L [in]	LB [in]	t [in]	R
15	3.54	0.98	0.47	G 3/4
20	4.33	1.18	0.59	G 1
25	4.65	1.18	0.59	G 1 1/4
32	5.12	1.5	0.51	G 1 1/2
40	5.51	1.38	0.51	G 1 3/4
50	6.89	1.97	0.59	G 2 3/8



Overview of metal bodies for GEMÜ 560

	Spigots																		Threaded connections	
Connection code	0		16		17				37	59			60				63	65	1	9
Material code	34	40	34	40	34	37	40	C2	34	34	40	C2	34	37	40	C2	37	34	37	37
DN 6	-	X*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DN 8	-	X*	-	-	-	-	-	-	-	-	-	-	-	-	X*	X	-	-	-	-
DN 10	-	-	X	X*	X	-	X*	X	-	-	X*	-	X	-	-	X	-	-	-	-
DN 15	X	-	X	-	X	X	-	X	-	X	X*	X	X	X	-	X	X	X	X	X
DN 20	X	-	X	-	X	X	-	X	-	X	-	X	X	X	-	X	X	X	X	X
DN 25	X	-	X	-	X	X	-	X	X	X	-	X	X	X	-	X	X	X	X	X
DN 32	-	-	X	-	X	X	-	X	-	-	-	-	X	X	-	X	-	X	X	X
DN 40	X	-	X	-	X	X	-	X	X	X	-	X	X	X	-	X	X	X	X	X
DN 50	X	-	X	-	X	X	-	X	X	X	-	X	X	X	-	X	X	X	X	X

* only with actuator size 0

For further check valves, accessories and other products, please see our Product Range catalogue and Price List.
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